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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/585,095	03/02/2007	Zhenfu Zhao	006980.00006	5773

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EXAMINER
ANWARI, MACEEH

ART UNIT	PAPER NUMBER
2144	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	10/585,095	ZHAO ET AL.
	Examiner	Art Unit	
	MACEEH ANWARI	2144	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS,
WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>02 March 2007</u>.
2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
   closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-8</u> is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) <u>1-8</u> is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a)☐ All b)☐ Some * c)☐ None of:
       1.☐ Certified copies of the priority documents have been received.
       2.☐ Certified copies of the priority documents have been received in Application No. _____.
       3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
          application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)   4)☐ Interview Summary (PTO-413)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)   Paper No(s)/Mail Date. _____
3)☒ Information Disclosure Statement(s) (PTO/SB/08)   5)☐ Notice of Informal Patent Application
    Paper No(s)/Mail Date <u>6/30/2006</u>   6)☐ Other: _____

U.S. Patent and Trademark Office
PTOL-326 (Rev. 08-06)   **Office Action Summary**   Part of Paper No./Mail Date 20080223

DETAILED ACTION

1.   This is the initial Office action based on the 10/585, 095 application filed on

03/02/2007. **Claims 1-8**, as originally filled, are currently pending and have been

considered below.

Claim Rejections - 35 USC § 112

2.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly
> claiming the subject matter which the applicant regards as his invention.

3.   **Claim 3** recites the limitation "user management strategy" in the last line of the

claim. There is insufficient antecedent basis for this limitation in the claim.

4.

Claim Rejections - 35 USC § 103

5.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

6.   The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

    1.   Determining the scope and contents of the prior art.
    2.   Ascertaining the differences between the prior art and the claims at issue.
    3.   Resolving the level of ordinary skill in the pertinent art.
    4.   Considering objective evidence present in the application indicating
            obviousness or nonobviousness.

7.   **Claim 1-8** are rejected under 35 U.S.C. 103(a) as being unpatentable over

Droms et al. (Droms) U.S. Patent No.: 7,143,435 B1 and further in view of **Lim et al.**

(Lim), U.S. Patent No.: 5, 884,024.

8.   Regarding independent **claim 1**, **Droms** discloses a *method of broadband*

access device for controlling a DHCP relay user to implement control and management

of interaction between a DHCP client and a DHCP server (Figures 1-5B and Abstract &

par. 22 & 28; DHCP client and DHCP server) *so that all of the DHCP messages*

interacted between the DHCP client and the DHCP server can pass through the DHCP

relay (Figures 1-5B and Abstract & par. 22 & 28; forwarding packet authenticator,

RADIUS server and relay agent).

        However, **Droms** does not explicitly mention the which *modifying protocol fields*

in all of DHCP messages interacted between a DHCP relay and the DHCP client and

the DHCP server during initiation phase of the DHCP interaction at Application Layer of

TCP/IP protocol.

        In the same field of endeavor, **Lim** discloses *modifying protocol fields in all of*

DHCP messages interacted between a DHCP relay and the DHCP client and the DHCP

server during initiation phase of the DHCP interaction at Application Layer of TCP/IP

protocol (Figures 5-6 and Abstract; trusted identifiers).

        Accordingly it would have been obvious to one of ordinary skill in the networking

art to modify or incorporate **Lim's** teachings of embedding DHCP messages with an

identifier to help better track and identify the packets with **Droms** to help better ensure

the passing of messages through the relay.

9.   Regarding independent **claim 2**, **Droms-Lim** discloses *wherein the modifying*
further comprises the following steps: Step 1, after receiving any DHCP messages for
request sent from the DHCP client to the DHCP server, the DHCP relay filling in fields
associated with the DHCP relay in the DHCP message for request, so that any DHCP
messages for response returned from the DHCP server to the DHCP client can pass
through the DHCP relay (Droms Figure 2-5B; DHCP request, DHCP client, DHCP
server, DHCP relay and authentication/authorization data)*; Step 2, after receiving a first*
DHCP message for response returned from the DHCP server to the DHCP client, the
DHCP relay extracting and storing DHCP server parameters of the fields associated
with the DHCP server in the first DHCP message for response and then replacing the
DHCP server parameters with DHCP relay parameters of the DHCP relay and sending
the first DHCP message for response to the DHCP client (Droms Figure 2-5B; DHCP
request, DHCP client, DHCP server, DHCP relay and authentication/authorization data)*;*
Step 3, the relay processing any received subsequent DHCP messages for response
returned from the DHCP server to the DHCP client, determining whether the
subsequent DHCP messages for response contains the fields associated with the
DHCP sever, if not, sending the subsequent DHCP messages for response to the
DHCP client directly, otherwise, replacing the DHCP server parameters in the fields
associated with the DHCP server with the DHCP relay parameters, and then sending
the subsequent DHCP messages for response to the DHCP client so that any
subsequent DHCP messages for request sent from the DHCP client to the DHCP server
can pass through the DHCP relay (Droms Figure 2-5B; DHCP request, DHCP client,

DHCP server, DHCP relay and authentication/authorization data); *Step 4, the DHCP*

relay processing the subsequent DHCP messages for request, determining whether the

subsequent DHCP messages for request contains the fields associated with the DHCP

sever, if no, sending the subsequent data packet for request to the DHCP server

directly, otherwise, filling in the fields associated with the DHCP server with the DHCP

server parameter stored in Step 2, and then sending the subsequent DHCP messages

for request to the DHCP server so that any subsequent DHCP messages for request

can pass validity checking by the DHCP server (Droms Figure 2-5B; DHCP request,

DHCP client, DHCP server, DHCP relay and authentication/authorization data).

10.   Regarding independent **claim 3**, **Droms-Lim** discloses *further comprising: Step*

5, the DHCP relay controlling and managing the interaction between the DHCP client

and the DHCP server, varying network parameters of the DHCP client and detecting the

DHCP client online according to requirements of user management strategy (Droms

Figure 2-5B and par. 19; DHCP request, DHCP client, DHCP server, DHCP relay and

authentication/authorization data).

11.   Regarding independent **claim 4**, **Droms-Lim** discloses *wherein in Step 1, for*

DHCPDISCOVER or DHCPREQUEST message sent from the DHCP client to the

DHCP server, the DHCP relay fills in the fields associated with the DHCP relay with

values so that DHCPOFFER, DHCPACK or DHCPNAK response from the DHCP server

to the DHCP client can be sent to the DHCP relay (Lim Figures 5-6 and Abstract;

trusted identifiers).

12.   Regarding independent **claim 5**, **Droms-Lim** discloses *wherein in Step 2, the*

DHCP relay receives DHCPOFFER, DHCPACK or DHCPNAK response, extracts and

stores the DHCP server parameters in DHCPOFFER, DHCPACK or DHCPNAK

response, and replaces the DHCP server parameters with the DHCP relay parameters

so that a unicast request to the DHCP server can be still sent to the DHCP relay after

the DHCP client has configured IP address (Droms Figures 1-5B and Abstract & par.

22 & 28; forwarding packet authenticator, RADIUS server and relay agent).

13.   Regarding independent **claim 6**, **Droms-Lim** discloses *wherein in Step 3, the*

DHCP relay receives the subsequent DHCP messages for response, and if the fields

associated with the DHCP server are contained, the DHCP relay replaces the values of

the fields associated with the DHCP server with its IP address (Droms Figures 1-5B

and Abstract & par. 7-8, 12, 14 & 22; DHCP relay, DHCP server and IP address).

14.   Regarding independent **claim 7**, **Droms-Lim** discloses *wherein the subsequent*

DHCP messages for response is DHCPACK message in Dynamical Host Configuration

Protocol (Droms Figures 1-5B and par. 47 & 74-75; acknowledgment message).

15.   Regarding independent **claim 8**, **Droms-Lim** discloses wherein the subsequent

DHCP messages for request is DHCPREQUEST message, DHCPINFORM message or

DHCPRELEASE message in Dynamical Host Configuration Protocol (Droms Figures 1-

5B; DHCP request, DHCP inform messages).

**Examiner Note: Examiner has cited particular columns and line numbers in the
references as applied to the claims above for the convenience of the applicant.
Although the specified citations are representative of the teachings of the art and
are applied to the specific limitations within the individual claim, other passages
and figures may apply as well. It is respectfully requested from the applicant in
preparing responses, to fully consider the references in its entirety as potentially**

**teaching of all or part of the claimed invention, as well as the context of the
passage as taught by the prior art or disclosed by the examiner.**

Conclusion

Any inquiry concerning this communication or earlier communications from the
examiner should be directed to MACEEH ANWARI whose telephone number is
(571)272-7591. The examiner can normally be reached on Monday-Friday 7:30-5:00
PM ES.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's
supervisor, William Vaughn can be reached on 571-272-3922. The fax phone number
for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the
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system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

M.A.

/William C. Vaughn, Jr./
Supervisory Patent Examiner, Art Unit 2144